DRIVER

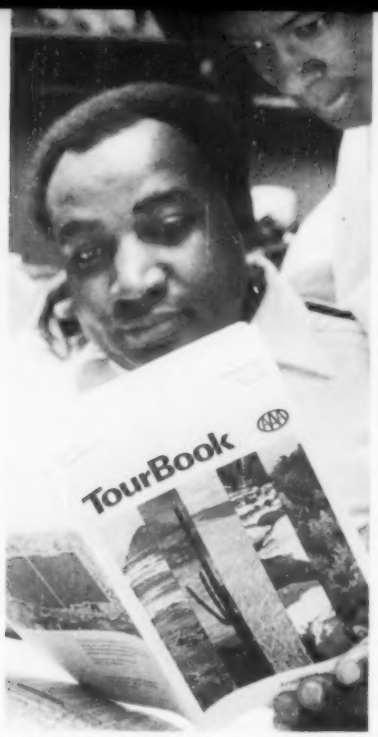
MAY 1983

getaway time!

TRIP PLANNING

DRIVER

Plan your vacation trip. Have definite routes in mind with definite stopping points for each day. Call ahead for motel reservations to insure you won't face a string of "no vacancy" signs.



Auto clubs have guides for all areas that list not only good restaurants and motels, but also points of interest for sightseeing.

TripPlanning

When you pack for the vacation, pack light. Take only those things you really will need.

Make sure you have enough room for all the passengers in the car, and enough seatbelts for everyone.

If you're a young driver planning your first long vacation by automobile, this article is for you.

Dad sent his older son into the bedroom to awaken his younger son. "Come on; get up," the older boy said. "We're going to leave." The small boy got out of bed, stood in the middle of the room yawning and stretching, and then disappeared under the blankets again. The older son laughed and went to tell his father. It was two in the morning.

By three, with the kids dressed and the car loaded, the man and his wife had left the driveway on their way to a vacation in the mountains. They had nearly 700 miles to go and they planned to drive the entire distance that day. They got as far as the other side of town before they turned around and came back.

They had forgotten to get cash for the trip.

They spent the next few hours sitting around in the car with four cranky, tired children until their bank opened at nine.

The trip wasn't ruined, but the delay spoiled the father's plan to avoid the heat of the day and the heavy traffic. His attitude toward the trip suffered and the family had to stop short of their goal and find a motel for the night, an additional expense they hadn't wanted.

The idea of leaving so early was not a good one to begin with, but the fault in the planning was costly both in time and in money.

Planning and preparing for a vacation motoring trip will eliminate such problems. What's more, they will help you solve unexpected difficulties on the road.

There will be problems and you can expect them. The more complicated the trip, the more things can go wrong. If you ran out of cash at home, you could go to a relative or friend for some, or you could drive to an automated teller at your bank. On a vacation trip, 250 miles from home, you'd find those remedies a little difficult.

Making the trip as easy and enjoyable as possible is what we're interested in. Safety is a part of that, and the best thing we can do for that is to tell you how to keep the driver alert, on guard and at his or her peak efficiency. So, much of this article will deal with that subject.

When to go: Go back to the beginning of this article. The father had a good idea, basically — leave early. His trouble was that he overdid it. Two in the morning is too early. So is four, if you haven't had enough sleep in the hours before.

You might want to leave on the vacation after work rather than waiting until the next morning, but don't. You might feel energetic enough to drive, but you will not be very efficient after a full day on the job. Typically, on the last day before a vacation you exert twice as much effort — part on the job and part on anticipation of the trip. You end up tired, and a tired driver is a lousy driver. Start out fresh and rested for your trip. Go early enough to miss the bad traffic, but late enough so that you've had a full night's sleep before you turn the key in the ignition. That way you can drive safer and longer without having to rely on caffeine to keep your eyes open.

What to take? In packing for your trip, ask yourself one all-important question about anything you think of taking: Do I really need this? Pack wisely, and that usually means "pack light." Less baggage creates less weight for the car to haul, and therefore more gas mileage. It also creates more room and comfort for the passengers.

continued

When one person gets drowsy the "co-pilot" can take over. When both become sleepy, it's probably time to stop for the day, or at least pull in for some coffee somewhere.

Before the car moves, establish the rules including use of seatbelts. Having activities to keep children busy will help keep the noise and fighting down.

DRIVER

THE
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FOR THE MILITARY DRIVER

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MAY

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THE EDITOR SPEAKS

DOUBLE CLUTCH

DOES BEER BELONG? NOT ON YOUR BOAT

Those of us who have been working in traffic safety education for a long time have been little short of astonished at the monentum which has built up in the past two years for cracking down on drunk drivers. And now the enormous energy those advocates of drunk driving laws have generated appears to be propelling a related program — cracking down on drunk boatters.

We have known for years that most recreational boating fatalities — as many as seven out of 10 — involve alcohol use. Although the Coast Guard has made a valiant effort to prevent recreational boating accidents — now running more than 1200 deaths a year — most of the states weren't doing much. The accident report forms the states use for water-related accidents often didn't even include questions to fill in on alcohol use.

This year, however, we find four states preparing to get tough: Maryland, Florida, Indiana and California. Maryland is going for a law that would levy a fine of up to $1,000 and a year in jail on a drunk boater. In Florida, if you're caught operating a boat while drunk, you can get 60 days in jail and a $500 fine. Although Louisiana, which had 68 fatalities in boating accidents last year, doesn't require a license, that state will levy a $500 fine on a drunk boater.

These penalties are not yet as severe as many of the new laws for drunk driving, but it looks to us like another idea whose time has come.

trip planning

continued

Don't pack too many changes of clothing because there will be cities along the way with laundromats where you can wash your clothes. If cold weather is feared, pack sweaters and light jackets rather than heavy coats. Save space (and weight) wherever you can. Also remember that fewer clothes mean lighter suitcases to carry into and out of motels along the way.

Remember your money, traveler's checks, credit cards, tour guides and maps. We'll come back to the latter two items later.

Drinking coffee while driving is not too good an idea, especially for the driver. If you spill it, you could badly burn your hand.

If you keep the kids occupied with looking out the windows they'll be quieter, happier and less prone to car-sickness. Electronic games keep them from getting bored.

Child safety seats, for any small kids you have, are a must. So are activities to keep the kids occupied, content and relatively quiet.

Who to take? An interesting question. It isn't always true, but sometimes it's better to leave very small children with grandma and grandpa instead of taking them along. The parents may not be able to enjoy the vacation if they have to constantly care for an infant, and the infant, of course, won't get anything out of the trip anyway. The same can often be said of small toddlers —and they can be even more trouble than infants.

Another consideration is space. Do you have a vehicle with enough room for the entire family? You must have room for everyone to sit where there's a seatbelt. Also the passengers must have enough room so they aren't cramped. Cramped space will make everyone restless and argumentative. Your children may fight with each other and annoy you or distract you from your driving.

Remember that the child safety seats take up a lot of room. Plan around that.

If you don't have the room for your family, you should think about borrowing a friend's car or station wagon, or perhaps about renting a

continued

larger automobile for the trip.

If you're traveling with a non-family group, take only those who can get along in a small area for long periods of time. You don't need the hassle of arguments.

How to prepare: Another hassle you don't need is a poorly-running car. So before you back out of the driveway for the summer voyage, make certain your car is up to the challenge of a trip of many hundreds of miles.

Long months of driving short distances — to work and to schools and stores — are harmful to your car because the engine is not given a chance to warm up. Also, serious problems not obvious to the driver on a short run may be very obvious on a long distance, high speed drive, like misalignment of the wheels.

The first thing you could do is take the car to a reputable mechanic, tell him you're going on a vacation, and ask him to put the car in shape for the trip. That way, he could check for parts that need repair or are due for replacement and you could leave on the vacation assured the car can carry you without trouble.

If you do your own car maintenance and keep to a regular schedule you'll have very little to do to prepare the car for the trip. Even if you've let some things go, there is a basic list of items to check.

Front-end alignment, which we mentioned, is one of those jobs you have to let a mechanic do. Misaligned front wheels can damage suspension components as well as the tires.

The tires themselves should be in good condition for the trip, with plenty of tread. Check the spare too because it's frustrating to get a flat 100 miles from civilization and then discover the spare is flat.

While you're at the wheels, examine the brakes and replace the shoes or pads if that's needed. Check the shocks carefully for wear.

Don't overlook the exhaust system. On a long trip a leaky exhaust can be deadly to people riding in a closed car. Replace the muffler or any other parts that are rusty or have holes.

Under the hood, check all the fluid levels and the condition of the hoses and wiring. Make sure the battery's electrolyte level is up. Change the oil and oil filter. If you'll be traveling through very hot areas, use a multi-weight oil.

Even after you've done all you can at home, anything can happen on the vacation drive. For handling the unexpected emergencies far from your garage we refer you to this month's Backyard Mechanic, "On-The-Road Survival Equipment."

How to plan: So far we have discussed a fair number of Whats and Hows, but now we have come to the main How.

The first part of this is to decide where you're going. Be reasonable on this. If you're in Florida, a trip to the Pacific Northwest is not very practical, not by car anyway. Pick a reasonable destination, one that won't require you to spend three-quarters of the vacation in the car.

A "reasonable destination" may depend on the time you have for the vacation. With a month off, that Florida-to-Oregon trip might make more sense. With only a week to spend, forget it.

The reason here, of course, is to avoid driving fatigue and the possibility of accidents. Many drivers, especially the younger ones, overestimate their ability to remain alert on long drives. Faced with driving a long distance in a limited time, they will either drive a longer time each day, or they will drive faster than is legal (or both). They will spend too much time in the car and return to work at the end of the vacation unrested. For them, getting there is not half the fun, it's not any fun at all.

So don't go too far. Make sure you are relaxed on the drive. If you're not enjoying yourself, you might as well stay home. A tense, irritable driver is not a good driver.

One way to help you enjoy the drive is to plan the route so you have things to see and do on the way to the final destination. If the drive is boring and monotonous you will become bored and inattentive, and you will make mistakes.

There are different routes to most destinations. Some are fast and some are slower but more scenic. Plan the trip around some of the scenic roads when you can. It will make a much more enjoyable vacation, and you'll be more alert and therefore a safer driver. (There's a limit, of course. Don't rubberneck too much. Admire the national monuments and pretty mountain ranges after you stop the car.)

In planning the route and keeping the drive reasonable, it helps to break it up into segments. Decide where you want to be at the end of each day's drive, and don't try to go too far each day. For instance, 500 miles is pretty far to try to go in one day even with someone else to share the driving, when you remember you have to stop for gas and meals too.

As a more or less arbitrary rule, don't be on the road any longer than 10 hours, including stops, in any one day. Of course, you might go longer if you had someone else to share the driving. But remember that even riding in a car is tiring, so never overdo it. Limit the hours you'll be in the car.

An auto club can help you plan a good trip. The American Automobile Association or one of the clubs allied with department stores or insurance companies can provide maps and advice on how far to go. They can also tell you the best routes to take and where the interesting sights are. The auto clubs often have travel brochures that list good places to stay and to eat.

They can also tell you about the availability of gasoline. We're not having the gas shortage problems we had a few years ago, but it's still not a good idea to let the gas tank get too empty. Plan your drive so you have plenty of gas stations available by the time you get down to one-quarter of a tank. For that you need to know the cruising range of your own car, especially when you drive in the long open spaces in the Western U.S.

For any drive you must know the condition of the roads you will travel on. The auto club can help here too. Another source is the state highway patrol. Check with them if there is any question about your intended route.

If you have any questions about the weather in areas ahead of you, you can call the weather service before you start out in the morning. They can give you advance warning of any storms.

There's one more advantage of

Every couple of hours, at least, stop and get out of the car. Stretching and getting your circulation going will help you to be more alert as you drive.

planning your trip that we'll mention: Motel reservations. If you know where you want to end up in the evening you can call ahead to that town for reservations at a good motel. That way, you'll definitely have a place to stay and you won't have to risk finding all the motels full within 40 miles of your vacation spot. It takes a little more time and effort to reserve a place, but it will be worth it when you drive up tired from a long day at the wheel.

Once you have the plan made for your entire trip, you can leave a list of places and phone numbers with friends or family in case they need to contact you in an emergency. This will add to your peace of mind and your enjoyment of the trip.

How to stay alert: We have several suggestions for keeping yourself alert behind the wheel on long trips.

If you're driving by yourself, don't drive any longer than about two hours at a time without stopping. Any longer than that and you tend to get into a rut mentally. Your body and mind react to the usual driving needs, but you might not be alert enough to handle an emergency situation that

continued

THE KIDS ARE ALL RIGHT

A friend of ours tells this story.

"My folks used to get mad at us on vacations. We always had to go to the bathroom just as soon as we started out, but we never did before we got in the car. So they got this idea. They loaded us in the car and then drove around the block and came back to the house. Then they let us back in the house to go to the bathroom. We left on the trip after that one false start."

There's a real communication problem with children on vacations. The parents want to get to their destination and the kids want to stop every few minutes and get out of the car. They get more and more irritable the longer they have to sit. Eventually, they begin to fight with each other and complain loudly to their parents on one of three subjects: "I'm hungry." "I have to go to the bathroom," and "When are we going to get there?"

What they really want is to stop and run around outside. They know instinctively they will feel better and they behave longer if they can run off some of their excess energy, even though they can't explain it to you that way.

The interesting thing is that you parents will feel better if you stop and get out and play with them for a while. You will be stimulated and more alert for driving, while the kids will be quieter and more content to sit for a while. So every couple of hours, stop the car and get out. Let the kids go play while you stretch and relieve sore, cramped muscles. Then you can drive off again.

We'll admit that even this plan won't satisfy a lot of the children. Even a couple of hours is a long time for them to sit. They quickly become restless and begin to annoy and distract their parents from the road. That's why you must have activities for them while they are "trapped" in the car.

Provide them with things to do while they sit in the back seat. Books and puzzles are good temporary baby-sitters. So are some of the hand-held electronic games — if you can stand the noise they make.

Don't give them anything sharp, like pencils or scissors. Sudden turns or bumps in the road could cause them to hurt themselves.

It's usually a good idea to give them something to do that will keep them looking around outside the car. This will help them avoid carsickness, if they are susceptible to that. Have them look for out-of-state license plates or certain words on road signs.

Another idea is to play word games with them. That will keep both the kids and you occupied.

Admit it. Sometimes you find those long drives as boring as they do.

continued

appears suddenly, like an animal that jumps into the roadway.

You don't need to stop for a long time. Just stop the car, get out and stretch for a minute. Get your circulation going again and then drive away.

If you're riding with someone, you can also stop at least every couple of hours. Go ahead and limber up, but then let the passenger take over the wheel for a while. The passenger will be fresh and probably eager for something to do besides sit and watch the scenery. (And you'll probably want to enjoy that scenery without needing to concentrate on the wheel.)

It's always better to travel with another person because the two can switch seats. While one is driving the other can read the maps or look for places to stop or even sleep for a short time. The sleep, by the way, will help revitalize the passenger for when he takes the wheel.

Another service the passenger can perform is to talk to the driver. Conversation will keep the driver's mind alert and help him avoid being hypnotized by a monotonous stretch of road. Of course, this doesn't apply to those drivers who are distracted from the road by talk — like those who feel they must look at the person they are talking to.

You should keep your eyes moving as you steer the car, not always looking at the road ahead, but flicking your eyesight to the mirrors, the side of the road, the passenger. This will help you stay alert. Primary focus should be on the road, of course, but moving eyes will not be so susceptible to being "hypnotized" by the road.

Adjust the seat for comfort because you'll be sitting in one position for a couple of hours. Keep yourself far enough away from the wheel so your elbows and knees are slightly bent and adjust the seatback so you're close to upright. Don't get *too* comfortable or you may lose concentration.

On the other hand, don't do anything to make yourself uncomfortable with the idea this will keep you awake. If you try something like leaving the window open to make yourself uncomfortably cold, it probably means you're too tired to drive safely. Let your passenger take over, or find a motel for the night.

Keep air moving through the car, either with air vents or the air conditioner, or by leaving the windows open. If the car gets stuffy you'll get drowsy.

Use the radio to help you stay alert because the steady drone of the tires on the pavement can act as a lullaby. But don't turn it up so loud that it completely drowns out the road noises and the sound of the engine.

What to eat and drink: On your stops to stretch and switch drivers, sometimes stop into a cafe for some coffee, even when you don't need to get gasoline. In addition to the boost you get from the caffeine in coffee, this will break up the routine. Routine is the enemy of alertness.

When you stop to eat, don't overdo it. You don't need as much food for energy on the road, because you are only sitting. But more than that, overeating will interfere with your wakefulness. Anytime you overeat you get drowsy.

Some kinds of food might make you sleepy. Avoid those. Also avoid foods that are too salty because they will make you thirsty. And very sweet foods might make you jittery. This happens sometimes with children, so make the kids go easy on sweets.

While you are at the wheel, don't try to eat anything because you could get distracted, especially if you dropped something in your lap. Likewise, don't try to drink coffee. If

TAKING IT WITH YOU

Not everyone wants to take a trailer on a vacation, but it does present certain advantages for those who decide to use it. Saving money is one very convincing argument in favor of the trailer. Whatever additional money you spend on gasoline to pull the trailer will be more than made up for in savings on food and motel bills. A fully-equipped trailer provides space and facilities to cook, eat and sleep.

And a fully-equipped trailer requires care and attention to safety. Here we'll assume you have the proper tow vehicle for your trailer and the proper equipment on the tow vehicle. Check the manufacturer's specifications and owner's manuals for both the trailer and the tow vehicle to make sure.

We'll give you just a few tips on vacationing with a trailer.

First, the trailer has to be loaded so the weight is balanced on all the axles. Only 10 to 15 percent of the trailer's total weight should be on the trailer tongue. Weigh the entire trailer and then just the hitch on a commercial truck scale. If the tongue weight is in the proper range, you're ready. If not, you will have to shift some of the cargo forward or back until the tongue weight is right.

When you pack the trailer for the trip, balance the weight for the proper hitch weight and don't load the trailer higher than its capacity. Too much weight in the front will cause an overloaded hitch and braking trouble. Too much weight in the rear can cause the trailer to sway — an extremely dangerous situation.

Also, balance the load side-to-side, because this will make the trailer ride more stable. Put heavy things down low and toward the front of the trailer. This keeps the center of gravity low, provides more stability in curves and keeps heavy objects from falling out of overhead storage during severe cornering. Pack everything you can into the trailer's cabinets and pad it with blankets and clothing.

Keep things you need frequently and emergency supplies in easy-to-reach places.

Pulling a trailer puts a strain on a car. A heavy trailer may decrease your gas mileage 40 to 50 percent, climbing ability by 50 to 75 percent and top speed by up to 50 percent. Your acceleration time will be doubled. Therefore, to avoid strain on the tow vehicle and its engine, accelerate slowly and shift smoothly. Try to maintain your momentum and stay out of stop-and-go traffic whenever you can.

On hills, keep the car in low gear. Build up speed as you approach the hill to give you the momentum to get over the top. On the downhill side, keep the car in low to aid in braking. Overuse of the brakes on long hills could cause them to overheat and fail.

Remember that the trailer doesn't travel

Let the kids out occasionally so they can blow off a little steam. They'll be happier — and quieter — when they return to the car.

you spilled it you could burn yourself. If you want a quick cup from a thermos, just pull off the road for a minute.

Above all, don't drink alcohol on the road. Not in the car, not in the cafe, not anywhere. It harms your driving ability and your judgment, and it's illegal to drink and drive.

How to concentrate: There are other things you can do to help yourself concentrate on the driving. Make up games to challenge the passenger with, like seeing who can better maintain a steady speed on a hilly road.

Maintain a uniform following distance behind another car by keeping the distance your car travels in two seconds between it and your car.

Read road signs aloud. Check the mile markers to see how accurate your speedometer is. In other words, do whatever you can to think about the driving and don't allow yourself to get hypnotized by the road.

If you expect it to happen, you can plan things to do to avoid it.

One of the dangers of long distance driving is the routine. Long stretches of monotonous road can have a hypnotizing effect on the driver.

While one person drives, the other can read the maps, look for the sights or road signs — or even sleep.

in the same curve as the car, so make a wide turn with the car to accommodate the trailer and to avoid running over a curb.

Stay out of high winds when pulling a trailer. Winds can cause a trailer to sway or even overturn.

If swaying occurs, keep of the car's brakes. The National Safety Council recommends speeding up just a little to get the trailer to straighten out, or applying *only* the trailer brakes while speeding up a little. If you're going downhill, skip the acceleration and just use the trailer brakes. Stop, check out the cause of the swaying and get it fixed right away.

Because of the weight of the car and trailer combination, and the difficulty in getting stopped quickly, never follow closely when hauling a trailer. The "two second rule" for allowing space between you and the car ahead should be extended to a "four second rule" when pulling a trailer.

If your car and trailer are passed by a large vehicle, like a semi, move as far to the right as you can, and make sure your car is *pulling* (that you are not coasting). This will minimize the chance of swaying caused by the wind from the large vehicle. If you ever pass another vehicle while pulling a trailer, remember the extra length you have behind you and the extra time it takes you to accelerate. Give yourself plenty of room to complete the pass. If traffic backs up behind your slow-moving trailer, pull off the road to let the cars pass.

Backing a trailer is very tricky so avoid it whenever you can. The trailer backs up in the opposite direction from the way the rear of your car is going. When you back a trailer, put your hand on the bottom of the steering wheel; the rear of the trailer will go in the same direction as your hand.

Yes, there's a lot to know to safely use a trailer. We'll say it again — read the owner's manuals.

The DOD Child Seat Belt Program

Make the First Ride a SAFE One

Auto accidents kill 800 children under 4 years of age and injure 50,000 every year. It is estimated that half of these lives could be saved if child auto safety seats were used by everyone. This article reviews the child auto restraint programs of the three military services.

The idea of disease prevention has been part of our society for as long as baked bread and apple pie. Who hasn't heard the warning, "Don't forget your overshoes" or, "Button up your coat" or the admonishment, "Wash your hands" or the question, "Did you brush your teeth?" Why then is there any hesitancy to remind friends and loved ones to "Buckle up?" The statistics of 28,000 killed and two million severely injured each year as occupants of automobiles leaves no doubt about the advantage of the simple procedure of fastening your seatbelt. What parent would not stop a child from touching a hot stove or stepping in front of a moving car? Yet, the same child will be permitted to ride in a car without safety restraints, and at times to stand on the front seat.

The national interest in highway safety has become more and more apparent. The Federal Government has encouraged the automobile industry to pursue the engineering of passive restraints for all new cars. In the meantime, commercial automobile ads emphasize the program to *Buckle Up*.

In early 1982, the Office of the Assistant Secretary of Defense for Health Affairs, ASD(HA), offered to support Dr. Lawrence Korb, Assistant Secretary of Defense, Manpower, Reserve Affairs and Logistics, ASD (MRA&L), in the pursuit of automobile safety. The Director of Safety, MRA&L, had many initiatives in recent years to increase the use of seatbelts within the military departments. Directives have been established requiring that seatbelts will be worn while riding in all government passenger vehicles, and many installations require the use of seatbelts when driving on the base or post. These efforts have demonstrated a satisfying reduction of injuries and deaths in government motor vehicle accidents; however, the programs need continued emphasis for private motor vehicles even though the requirement to "buckle up" exists both entering and leaving many military installations.

This concern about automobile safety was focused as an agenda item in the April 1982 meeting of the Defense Health Council. The discussion included the installation of air bags in DoD vehicles; an adverse "line of duty" determination for those who sustain injuries that could have been prevented by the use of seat belts; promoting the sale of automotive safety devices in Government Exchanges; and promoting the use of infant safety seats. The Council affirmed that the medical community should take an active role in promoting all types of safety behavior and awareness. In summary, the Council concluded that, "It was extremely important to study the whole issue of Preventive Medicine so that the appropriate allocation of resources could be made against those areas most likely to produce results. The Surgeons General recommended that any programs developed be outcome-oriented so that specific organizations would have the flexibility to determine the most appropriate inputs to meet the desired results."

With this charter, the Committee on Infant and Child Auto Passenger Restraints was formed to promote increased use of infant automobile seats. The Committee found that much ground work and effort had already begun by such groups as the American Academy of Pediatrics, American College of Gynecology, the American Trauma Society, and other professional societies. We hope to build on these efforts. Our stated goal in the infant restraint effort is "to integrate child passenger safety information and follow-up into the routine of medical practice so it becomes a continuing emphasis."

Six months after emphasizing this preventive program, the military medical departments have indicated enthusiastic support. The initial Service responses follow:

Army child seat belt initiatives: In response to DoD's request to the Army Medical Department for support in reducing infant and/or child deaths from automobile accidents, The Surgeon General requested the Commander, Health Services Command to develop a command-wide implementation plan to reduce motor vehicle injuries or fatalities of children through the use of child/infant car seat restraints.

The Health Services Command requested the Army Medical Department (AMEDD) Activities to develop infant and child seat belt initiatives. The *Early Rider Program* packets from the National Highway Traffic Safety Administration were enclosed with the request which provided guidelines in developing an Infant and Child Restraint Loan Program. Army installations were strongly encouraged to coordinate with Safety and Army Community Services in developing this important initiative.

A large number of installations responded enthusiastically to this request. They recognized the importance of child car seat restraints in the prevention of serious or fatal motor vehicle injuries. Most of the programs include education on infant or child car seat restraints which are conducted through the medium of Expectant Parents, Parenting, Newcomers Orientation, Well Infant or Child, and Post-partum classes. The professional staff participates in the education of parents during clinic visits, e.g., Pediatric, Obstetric, Family Practice and Emergency Room.

The AMEDD is utilizing posters on infant or child car seats in the clinics, day car centers and other areas; disseminating flyers in classes, clinics, day care centers, post exchanges and commissaries, and coordinating with public affairs to provide maximum publicity about the infant safety effort. They are attempting to make infant car seats available through car seat loaner programs. Many installations report these programs to be in various phases of development. Thrift shops have been identified as a potential resource for families with limited income. The cooperation of Post Exchanges has been elicited to insure availability of reasonably priced crash-worthy restraints.

The Army Medical Department will continue to monitor these initiatives and will provide support, encouragement, and/or assistance to them in their efforts to promote maximum use of car seat restraints by the military community.

Navy child seat belt initiative: One of the Navy Medical Department's overall objectives is to administer a total pediatric health care program with all efforts directed toward the enhancement of the safety and health of the children of our Navy family. The child seat belt program is one important aspect of the Navy's pediatric health care effort.

The goal of the Navy Medical Department child seat belt program is to integrate child passenger safety information and follow-up into the routine of medical practice. This is being accomplished at the Navy's Regional Medical Centers, Naval Hospitals and Regional Clinics in a variety of ways.

Emphasis on the use of child seat belts has been a continuing effort in the prenatal care classes given at many Navy medical facilities. The professional staffs are now also encouraging the families of infants to use crash-worthy child safety seats during post-partum and newborn discharge planning classes. Information on where and how to obtain the seats is

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passed along by pediatric physicians and by professional nursing staffs in their discussions with parents on the positive aspects of the use of child restraints in car seats. Literature is made available to prospective parents on the value of taking their new offspring home in an infant restraint car seat and protecting the infant through the formative years, using the seat whenever the child is in the car.

Navy Medical department and Navy Exchange personnel are coordinating the stocking of approved seats for purchase, and in several locations, Special Services have established loaner/rental programs using non-appropriated monies. Navy families are now able to obtain the seats at a reasonable price, or they may borrow one should they not be able to afford the purchase price. Videotape presentations and literature are displayed in the lounges of the Nursery, OB/GYN and Pediatric Clinics encouraging the use of the child seat belts.

Information on this program is published in Navy Exchange sales releases, Special Services Activities Newsletters and in various Medical Command publications. Several Navy pediatric physicians have publicized their hospital's involvement in this initiative among their military counterparts in the American Academy of Pediatrics for the purpose of sharing ideas. This sharing of ideas has resulted in further improvements to this important program.

Air Force initiatives on child restraint devices: The Air Force Medical Service has actively supported the use of seat belts and child restraint devices for a number of years through the Pediatric Clinic and in prenatal classes. With many states enacting laws requiring that children be properly restrained, a large number of bases are putting emphasis on educating the base population on this important safety step.

An informal survey of Air Force bases was conducted through the medical facility Health Education Coordinators. Responses indicated that the primary educational endeavors in the medical treatment facilities were made through prenatal classes, by means of handouts, and using audiovisual aids. Base safety is also involved in educational efforts by providing resources to the military treatment facilities.

Reinforcement for education is provided during well-baby checkups in the Pediatric Clinics, and through newspaper articles published in the local base newspapers. Most responses reported that federally-approved child restraint devices are available in local Base Exchanges.

Loaner programs are available at some 17 bases, primarily through Family Services, and several more have safety seats on order and will implement a loaner program once they arrive on base. Other personnel have access to loaner seats through local health departments or service agency programs.

Late last year an all MAJCOM letter was sent out emphasizing the necessity of the program and recognizing the need for getting personal information to the parents. This year during the annual Health Education Coordinator workshops, participants will spend some time discussing current initiatives and view audiovisual programs on child restraint devices. A panel will present DoD directives, Air Force initiatives, sources of resources, and how the local program is conducted at a typical base. It is hoped that by sharing ideas and resources other bases will become even more active in these safety efforts.

Air Force pediatrician "Top Click" award winner: The "Make It Click" award honors the individual American Academy of Pediatrics (AAP) Fellow with the most success in the "Make It Click" contest, a safety awareness campaign conducted as a joint national effort by the Academy and the National Safety Council. The campaign was designed to encourage the use of child safety seats and seat belts by asking children and parents to sign a pledge to buckle up for a trial period of 2 weeks. Anthony M. Policastro, Lt Col, USAF, MC from the Uniformed Services Chapter East was recently honored at the Annual Meeting of the AAP as the individual Fellow who collected the most signatures, with 887 names. Dr. Policastro, of the Pediatric Department at the Malcolm Grow USAF Medical Center, ran away from the competition collecting more signatures than any other single pediatrician in the United States, civilian or military. As the winner, he received a plaque. In addition, the Uniformed Services Chapter West won the top award among the 52 Academy Chapters.

The membership of the Uniformed Services Chapters East and West of the American Academy of Pediatrics is composed of pediatricians of the Army, Navy, Air Force, and Public Health Service.

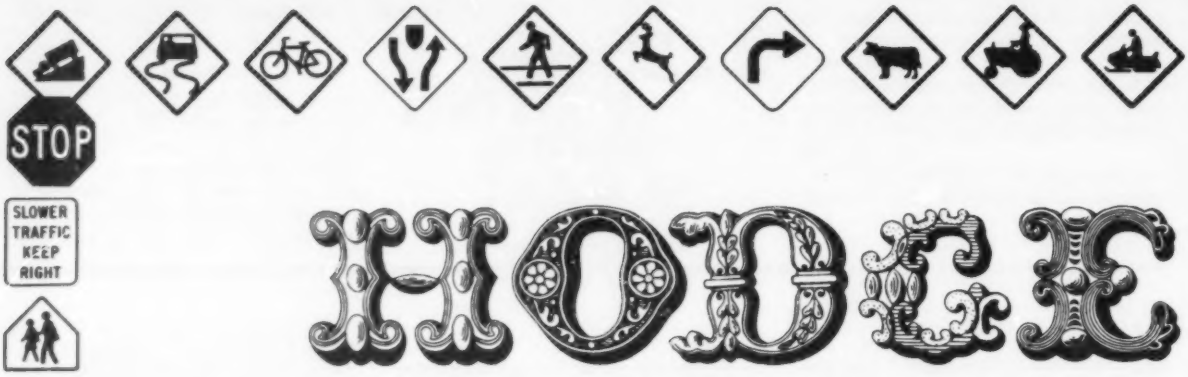
The Chapters' Committee on Accidents and Poisoning in Children have identified child injuries due to car accidents as their primary focus. The campaign to eliminate and reduce injuries to children has commenced in two phases.

The first phase emphasized participation in the National Safety Council's "Make It Click" Campaign. The campaign activities involved distribution of publicity pamphlets, information related to infant safety restraint systems, and most importantly a pledge for each parent to sign that children will be placed in safety restraints.

The second phase of this effort will include working with each post/base commander to make the restraint of infants in cars mandatory on their installations. The committee, through the individual pediatricians, will utilize the same tactics and the same information that has been used by several state pediatric Chapters, notably Tennessee and Michigan, to make infant safety restraints mandatory in their states. The tactics will include close cooperation with wives clubs, installation commanders, hospital commanders, military police, and others who are vitally interested in safety. The folder "Make It Click" has several ideas that we are suggesting the military pediatrician may utilize both in their own "Make It Click" campaigns and to convince installation commanders to make it mandatory on their bases.

The Committee plans to recognize individual pediatricians in their efforts at the next Uniformed Services meeting who have been particularly successful in their campaign.

This report describes the initial child seat belt programs of the Military Medical Services. This initiative will remain a priority of the DoD, Health Affairs and Safety offices until success stories are commonplace. More than 20 states now have legislation on the use of infant automobile restraints. Until the use of this preventive measure has become a way of life, efforts need to continue to help those who cannot help themselves.



HODGE

This month, DRIVER is presenting a safety quiz. The questions cover many areas of driving safety, but a few may not apply to those stationed overseas. We're not scoring the quiz because we think all the questions are important, but if you get 24 or more right you're doing pretty well.

1. Is overtaking and passing on the right ever permitted?

A. No. It is always illegal.

B. Yes, when the vehicle overtaken is making or about to make a left turn.

C. Yes, on a street with two or more lanes of traffic moving in each direction, or on a one-way street with two or more lanes.

Answer: B and C. The reason for not ordinarily allowing passing on the right is that it might force the car being passed across the center into oncoming traffic. If the car on the right ran out of room it would merge left. However, the situations in B and C eliminate this possibility.

2. What is the basic rule for speed?

A. Drive no faster than the posted limit.

B. Drive no faster than is safe considering the present road conditions.

C. Drive at the speed the majority of traffic is moving.

Answer: B. This takes into account the posted speed limit, but adds a little to it. In certain conditions (wet roads, low visibility, etc.) the posted limit is too fast; then you should travel no faster than is safe. The speed traveled by the majority of the other cars might be above the speed limit. If a policeman stopped you for speeding, he wouldn't accept the argument "But, officer, they were all going that fast."

3. Two cars on intersecting roads reach the intersection at the same time. Which one has the right of way to go through first?

A. The car not making a turn.

B. The car to the left.

C. The car to the right.

Answer: C. There is not a logical reason for this rule, beyond the fact that someone has to go first. Of course, if the car on the left moves first, the driver of the other car would be foolish to insist on his right of way.

4. You should wear your seatbelts

A. Snugly across the hips and chest, but not tight.

B. Loosely across the stomach with the shoulder belt slack enough to allow movement.

C. Tight to keep you in place as you make quick maneuvers.

Answer: A. The belt should be across the hips, not the stomach, to guard against injury in an accident. In an accident the sudden slowing will cause the belts to lock up in a split second. If they are worn loosely your body can move too far and might hit the dash or windshield. It is true that belts hold you in place during sharp turns and maneuvers, but it is not necessary to keep them tight. Sudden slowing or changes in direction will cause them to lock up. Belts should be adjusted so they are snug, but comfortable.

5. If your car goes into a skid on a wet or icy road, you should steer

A. Away from the skid.

B. Into the skid.

C. Straight.

Answer: B. Steering away from the skid — steering in the opposite direction from where the rear wheels are going — will make the skid worse. Steering straight will do nothing to help. Steering into the skid — toward the direction the rear wheels are skidding — will help to stop the skid. It calls for a light touch on the wheel and pumping the brakes to keep them from locking up.

6. A school bus is stopped ahead of you and its red lights are flashing. What should you do?

A. Stop until the red lights stop flashing.

B. Stop and then proceed slowly.

C. Slow down.

Answer: A. Although it's not the law in every area, don't pass a bus while the red lights are flashing. The bus driver has turned them on because he or she is letting school children enter or leave the bus. Only the driver knows when the children are all out of the way of traffic. You can't see through the bus.

7. Driving at night, you come upon a flashing yellow light on an intersection stop light. What does it mean?

A. You should stop and look both ways before going through the intersection.

B. Nothing. This is how the lights are set at night.

C. You should slow before you

PODIE

MISCELLANEOUS QUESTIONS ABOUT DRIVING

cross the intersection and proceed with caution.

Answer: C. This is indeed how lights at some intersections are set at night, but you should be cautious. It might also mean the lights have malfunctioned. You should slow down and look in both directions before you go through the intersection, but you don't have to stop. The traffic on the cross street will probably be facing a flashing red light. They are the ones who need to stop before proceeding.

8. The "two-second rule" refers to

A. The distance you should allow as a following distance between your car and the car ahead.

B. The minimum distance it takes you to stop your car at highway speeds.

C. The distance ahead you should be watching at all times to see possible hazards.

Answer: A. The distance between you and the car ahead of you should be the distance you travel in two seconds. The minimum distance you need to stop your car at highway speed is the distance your car travels in *four* seconds. The distance ahead you should watch for hazards is *twelve* seconds. If you watch 12 seconds ahead you will see dangers to yourself and to cars ahead of you, and you will have time to react before the four second stopping zone.

9. Which of the following statements about alcohol is true?

A. The three main factors that affect how drunk a person gets are body weight, time spent drinking, and amount of alcohol consumed.

B. A person's judgment, reasoning and coordination are all impaired by alcohol.

C. At least 55 percent of all fatal motor vehicle accidents have alcohol impairment as a factor.

Answer: They are all true. The last statement is a new estimate by the National Highway Traffic Safety Administration, and it compares unfavorably to the old estimate of 50 percent. Drinking and driving may be *the* traffic safety problem.

10. The best way to deal with an oncoming driver who fails to dim his headlights is

A. Flash your brights at him and then dim then again.

B. Turn on your brights and leave them on.

C. Move your eyes back and forth from the center of your lane to the road edge until he passes; don't look at his lights.

Answer: A. You probably want to try B when this happens to you, but he might not realize his brights are on, so give him the benefit of the doubt. If he really is a jerk and A fails, try C. Don't look at his lights because they will cause temporary glare blindness.

continued

11. Which of the following should be done before starting the car?

A. Check the mirrors and seat position, and adjust them if necessary.

B. Fasten the seatbelts.

C. Check around the car for anything you might run over when the car moves.

Answer: All of them, though of course not in that order. They are all too important to forget and much easier to do before you turn the key.

12. What percentage of cars that are stolen have their keys in them?

A. 5%

B. 20%

C. 40%

Answer: C. For all the talk about the car theft problem, a sizeable part of this problem could be handled if drivers would lock their cars and take the keys with them. Other easy things you can do to thwart thieves are to park only in well-lit areas, keep valuable items out of sight in the car, and don't hide spare keys on the car — if you can get them easily, thieves can find them easily.

13. You car's right wheels slip off the paved surface of a road onto a shoulder that is a couple of inches lower. What is the best way to get back on the road?

A. Turn the wheel sharply to the left to get back on quickly and maintain speed.

B. Ease off the gas, steer straight until the car slows and then turn back onto the road when traffic permits.

C. Honk your horn to alert approaching traffic, accelerate and turn sharply back onto the road.

Answer: B. The central problem in this situation is maintaining control. With one side of the car on pavement and the other on gravel or dirt you could easily lose control. Allow the car to slow down and keep it going straight. You may have to turn sharply, depending on the height difference between the pavement and the shoulder, but you must be traveling slowly or you might steer too far and cross into other traffic lanes. It would also be a good idea to signal your intention to re-enter traffic.

14. What is the most fuel-efficient speed?

A. 65-70 mph

B. 55 mph

C. 35-45 mph

D. 20 mph

Answer: C. You might think 55 is correct, because of all the emphasis on that speed, but 35-45 is more economical. However, that range is too slow for highway driving, and testing has shown that 55 is a good compromise between speed and fuel savings. Your car gets 18 percent better mileage at 50 than at 65 mph, and 20 percent better mileage at 55 than at 70 mph.

15. The best gear for saving gasoline is

A. High

B. Low

Answer: A. Therefore, the idea is to get into high gear as quickly and smoothly as you can. In a car with a manual transmission, get through the lower gears gently and quickly and accelerate in high. This means, do not try for maximum acceleration in each gear. With an automatic transmission, give the gas pedal enough pressure to get the car moving and then ease off, to get the car to shift into the higher gears.

16. On a freeway, which lane is the "through lane?"

A. The left lane.

B. The middle lane or lanes.

C. The right lane.

Answer: B. The middle lane (or lanes) allow free movement of traffic without hazard from those entering or exiting the freeway in the right or "slow" lane. The left lane is the "fast lane," for those motorists traveling the speed limit or above (illegally, of course). The through lanes are usually the best lanes to stay in, because they give you more directions to move in case of emergency.

17. What is the "blind spot?"

A. The area obscured by the rear door pillars.

B. The area of your vision in each eye where you cannot see.

C. The area not covered by any of the rearview mirrors on the car.

Answer: C. B is also correct, and a case can be made for A because it affects the blind spot defined in C, but let's stick with the last answer. As you look in your mirrors preparing for a turn or lane change, there is an area not shown in your mirrors. This area is large enough to hide an entire vehicle. Look over your shoulder in the direction you intend to move before you go that way. Don't rely on the mirrors alone.

18. At what age can children be placed in the seatbelt rather than a child restraint?

A. 4

B. 5

C. 6

Answer: B. This is the commonly accepted age, but the important factor is the child's size. The child should be at least 40 pounds before you let him or her use just the seatbelt. Any smaller than that, the child could be hurt by the belt and is safer in the carseat. The bottom line is this: If your child is small, get a carseat. Don't let him or her crawl around in the car; don't let the child stand on a seat; and don't hold the child on your lap.

19. The correct way to sight to keep your car in a steady position on the road is to

A. Watch the center divider or lane markings as they pass your left fender.

B. Follow an imaginary line down the center of your lane.

C. Watch the right road edge as it passes your right fender.

Answer: B. Too many people watch the lane markers or the road edge. This leaves them either weaving in the lane, or too close to one side of the lane or the other. Worse, it keeps their vision concentrated on an area too close to their own cars. For

safe driving they need to look far ahead. Follow an imaginary line down the center of the lane. Your reflexes will enable you to keep the car both centered and steady. More than this, it will help you see hazards in enough time to do something about them.

20. Which of the following will help sober you up when you have drunk too much?

A. Coffee

B. Exercise

C. Cold shower

Answer: None. If you're drunk, coffee, exercise, cold showers or any of the other "cures" will have no effect on your drunkenness. These methods could help you wake up, but you'll still be drunk, and when you are drunk you are in no condition to drive. The only thing that will sober you up is time. Sit down and talk with some friends, watch TV, take a nap or kill time some other way, but *do not* try to drive a car when you are drunk.

21. In which of the following situations is it unwise to attempt to pass another car?

A. On a hill.

B. On a curve.

C. Where the solid center line is in your lane.

Answer: All of them. Obviously, you can't see around the curve or over the hill. Also, on a curve the additional speed you must go to complete the pass could cause you to lose control of the car. As for the solid line on the road, always obey it, even when it doesn't seem necessary. The highway department painted it there for a reason, and they might know something you don't — like maybe the terrain makes distances deceptive to the eye.

22. Which driving position is best?

A. Close enough to the wheel so your arms and knees are slightly flexed.

B. Close to the wheel for better vision.

C. Far back from the wheel to keep safe in case of accidents.

Answer: A. You should be far enough back from the wheel that your movements are not interrupted by your elbows hitting your own body. You should be close enough so that you do not lose your grip on the wheel in quick manuevers. If you're concerned with vision, as in B, keep your windshield clean. If that doesn't help, have your eyeglass prescription checked. As for keeping safe in case of accidents, wear your seatbelt. Staying a full arm's reach from the wheel will not help you in a collision if you are not also wearing the belt.

23. If you are about to hit a pothole, what is the best action you can take?

A. Do whatever you can to miss it.

B. Brake, so that you hit the pothole at a slow speed.

C. Accelerate to hit the hole quickly.

Answer: B. You should try to miss the hole if you can, but answer A doesn't take into account the other traffic. You must stay within your own lane, both to avoid the other cars and to avoid losing control. If you cannot avoid the hole, you should hit it slowly to minimize the chance of damage to your tires. If you hit the hole fast you could blow a tire, or even lose control of the car.

24. When parking on a street with a curb, facing downhill, you should turn the front wheels

A. Straight

B. To the right.

C. To the left.

Answer: B. If the wheels are turned to the right, the car will roll forward and hit the curb if the emergency brake doesn't hold. If you were parking uphill by a curb, you would turn the wheels to the left for the same reason. If you were parking uphill on a road without a curb, you would have to turn the wheels to the right. If the car rolled, this would make it roll off the roadway, rather than into traffic.

25. A good way to avoid the problem of glare from approaching headlights at night is to

A. Keep the windshield clean so dirt doesn't diffuse the light and make glare worse.

B. Wear sunglasses during the day so you protect your night vision.

C. Keep rested, because tired eyes react badly to glare.

Answer: All of them are good ideas.

26. Which of the following is good for providing traction on snow and ice in the winter?

A. Letting a little air out of the tires.

B. Snow tires, with or without studs.

C. Tire chains.

Answer: B and C. A is a little tricky because it's a commonly accepted procedure, but it's wrong. Not only won't bleeding air from the tires help, it will also make your tires wear out quicker.

27. If you enter a right-hand turn and find yourself moving into the opposing lane of traffic, what is the probable cause?

A. The sharpness of the curve.

B. Lack of traction of the road.

C. The slope of the road at the curve.

Answer: All of these are factors, but the critical factor in this situation is your speed. Taken slowly enough, you can negotiate any curve safely. Ease off the gas pedal on curves, especially sharp ones.

28. You should signal for a turn or a lane change:

A. At all times.

B. When there is any car close enough to be affected by your movement.

Answer: A. Although the traffic laws in your area might say something like B, it is best to signal at all times and for one simple reason. If you do it at all times, it will be a habit. If you signal only selectively, you might forget to signal at an important time, like when someone is close enough to hit you.

STANLEY and LIVINGSTONE
I'M BORED! BORED! BORED!
the JUDGE CRATER FOUNDATION
COLLAR BUTTON FINDERS
WOT'S THE MATTER OLLIE?
I FEEL LIKE ALEXANDER THE GREAT! EVERYTHINGS BEEN DONE! THERE ARE NO WORLDS LEFT TO CONKER!
I KNOW WOT, OLLIE! WHY DON'T YOU 'OP IN THE 'ONDA AND TAKE A NICE DRIVE UP THE RIVER?
THAT'S IT, STANLEY... THAT'S IT! MY CONK-QUE
... AND STOP CALLING ME 'OLL
I AM DR. LIVINGSTONE AN
GONNA STAY HOME AND FE
CAT WHILE I GO FORTH AN
SMACK!
... THATAWAY ... OLDS CUTLASS...
'E WENT THATAWAY
... IN A FORD FUTURA
SMALL COMPACT CATARACT NO. 3
SUBCOMPACT CATARACT NO. 2
BAM!
CHEVY CITATION
FORD FUTURA
CHEVY CAVALIER
OLDS CIERA
LIONS
AND TIGERS
AND RAIN
OH MY!
TOYOTA COROLLA
TERCEL
CRUNCH!
HONDA ACCORD
DODGE AIRES
CHEVY CHEVETTE 4-DOOR
FORD MUSTANG
TINKLE! TINKLE!
MT. ST. OVERHEAT
PEDESTRIANSVILLE
LIONS
AND TIGERS
AND TRUCKS
OH MY!
DOPE, MAN?
HE WASN'T DRIVING A CAR, THOUGH. THE FAT GUY I SAW WAS ON CRUTCHES!
CADDY DEVILLE
CADILLAC DEVILLE
CADILLAC BROUGHAM
DUT
FULL SIZE CATARACT NO. 6
COMPACT CATARACT NO. 4
FORD LTD
BOP!
CHEVY MALIBU
FORD THUNDERBIRD
OLDSMOBILE CUTLASS
TINK
FORD LTD
CHEVY CAPRICE
CHRYSLER CORDOBA
INTERMEDIATE SIZE CATARACT NO. 5

...the Source of the MILE
May 1983:
...SO 'E TOOK OFF IN THE 'ONDA AND NOBODY'S 'EARD FROM 'IM SINCE. 'E'S BEEN GONE FOR MONTHS AND THE IRS WANTS TO AUDIT EVERY TAX RETURN 'E'S EVER FILED! THE CAT'S SICK AND THE CRICK'S RISIN'! I'VE GOTTA FIND 'IM! MAYBE YOU REMEMBER 'IM, MISTER ...A PORTLY GENT IN A SMALL SUBCOMPACT?
YEAH, I REMEMBER. ...THE FAT GUY IN A HONDA. HE WENT THATAWAY!
SCOTCH and WATER FALLS WITH A HIGHWAY PATROL CHASER
THATAWAY
IT'S THE 'ONDA! OLLIE'S 'URT!
SMALL SUBCOMPACT CATARACT No.1
THE SOGGY FAT GUY? HE'S OK. I SOLD HIM A TOYOTA COROLLA TERCEL AND HE WENT THATAWAY!
OUCH!!
HONDA CIVIC
KERASH
MILE MOTORS
TINKLE!
CHEVY CHEVETTE 2-DOOR
DATSUN Z10
FORD ESCORT
ROADHOGS
TAILGATORS
HIC
OH MY... ...ACHIN' BACK!
LIONS
AND TIGERS
AND CAR THIEFS
SHADDAP!
DRUGOPOLIS
THATAWAY
DR. LIVINGSTONE, I PRESUME?
HERE'S ANOTHER FINE MESS YOU'VE GOTTEN ME INTO! "WHY DON'T YOU OP IN THE 'ONDA AND TAKE A NICE DRIVE UP THE RIVER..." M-M-M-MMPH!
...AND DON'T THINK IT WAS EASY FALLING UP THOSE CATARACTS!
MILE 119% MOTORS
KELLEHER
make it Click

leave the road racing to the road racers

Professional road racers always wear all their safety equipment, which is very important when hanging off the side of the bike with a knee too close to the pavement.

Faced with a series of curves, gentle bends or sharp corners, some motorcyclists suddenly think they're going to be the next world motorcycle racing champion. They almost lay down on the bike as they accelerate along straightaways, only to jump up and forward on the seat as they brake hard for a turn. Then they shift their weight into the turn and literally hang off the saddle with one knee almost touching the ground while the machine leans over at an extreme angle.

Such finesse is required of the world champion but can be downright foolish on public highways. Afterall, professional road racers have many things going for them that allow them to safely do this kind of performance riding.

At the top of the list are their machines. In most cases, they were especially built and tuned for racing. Built with the stress of high speeds in mind. Even the basically stock street bikes run in Superbike races have many safety modifications.

Additionally, these machines are attended to by highly-skilled, professional racing mechanics. Mechanics who will put more maintenance time on a bike in a single weekend than most street machines will get in a lifetime.

There's not much difference between the racers' personal equipment and that of the street riders, other than the professionals *always* wear *all* of theirs. Boots, gloves, "leathers," pads, helmet and eye protection are the rules for the pros. Anything less is foolishness for the street riders.

Actually, there is one other big difference between the pros' personal equipment and that of most street riders: The professionals always buy the best, regardless of cost. None of those $49.95-special helmets for the pros. If the best helmet costs $299.95, then that's what they pay. Should it get put to the "test," it's replaced. There's no riding with questionable equipment.

Perhaps the biggest piece of equipment difference between the professional road racers and street riders is tires. The pros use specially-made racing slicks. These treadless tires stick to the pavement like glue and have very thin sidewalls to help them get rid of heat built up by speeds. Racing tires can be sticky and have thin sidewalls because they only have to last a couple of hundred miles at the most.

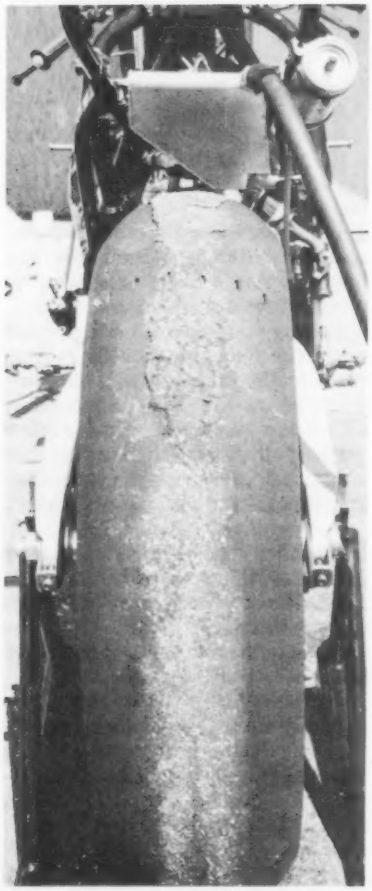
Street tires have to have tread to

(left)
When you get on a motorcycle do you feel like you are three-time 500cc World Champion Kenny Roberts (#21) or leading contender "Fast" Freddie Spencer (#19)?

(below)
Even the basically stock Superbikes have safety modifications, although it's hard to tell as they fly by.

A racer's powers of concentration have to be exceptional, especially in close quarters.

(below)
On the race track it is all one-way motorcycle traffic, which is much safer than the street with cars and trucks going every which way.



The racing slick is so tacky it picks up anything that is loose. Note the shoulder surface that allows for the extreme cornering lean angles.

handle all types of weather. Their sidewalls have to be thick enough to deal with road hazards such as rocks, potholes and curbs. And, of course, they have to last more than a couple of hours.

Because street tires do have tread, they aren't as stable at extreme limits of acceleration, braking and cornering as racing slicks. The "blocks" of tread can shift suddenly under these extreme limits, causing sudden loss of control. Also, the road racing slicks have wrap-around surfaces designed for the extreme angles of cornering.

And just as street tires aren't safe for road racing, racing slicks should never be used on the street.

Yet the biggest reason for not playing "Ronnie-Road-Racer" on the street is the street itself. In professional road racing the traffic is all going one way with the same goal and there are few distractions. There is no traffic coming at the riders or crossing their paths. There are no cars, pick-em-ups or 18-wheelers.

There are only racing motorcycles with highly skilled riders under the watchful control of concerned racing and safety officials.

So, when you're on the street, ride accordingly. And, if you want to race, as the bumper sticker says, "Go to Daytona."

SAE

$57.2 BILLION

The total societal cost from motor vehicle accidents in the United States during 1980 was estimated at $57.2 billion by Lawrence J. Blincoe and Stephen Luchter of the National Highway Traffic Safety Administration. This estimate of the economic cost was made during the recent 1983 SAE International Congress and Exposition in Detroit.

Of this total, medical costs were responsible for $3.3 billion, property losses for $21 billion, lost productivity for $14.2 billion, and other costs for $18.7 billion. Other costs included: legal and court; coroner-medical examiner; emergency (police, firefighter and emergency medical services); insurance expense; public assistance administration; and government safety programs. Funeral costs weren't included because all of those who died in motor vehicle accidents would eventually have died anyway.

Property-damage-only accidents were the largest contributor to the total because of their great number. The second largest contributor was fatalities, the authors reasoned, due to the magnitude of productivity losses associated with death at an early age.

The figures put a dollar value on the over 51,000 killed and nearly four million injured in 1980 motor vehicle accidents. Yet the true value of the lives, and the physical and mental capabilities destroyed can never be adequately measured. The pain, suffering and frustration felt by individual accident victims, their families and friends cannot be expressed in dollars and cents.

These costs — both human and monetary — have challenged the Society of Automotive Engineers to work even harder to enhance safety in travel. Safety's importance to the SAE was evident in its annual Congress. Among the subjects addressed in detail were: pedestrian injuries, side-impact protection, skid-control systems, crash energy management, seatbelt education, analytical safety techniques and accident avoidance.

For example, a French group presented a paper on "Conditions Required to Avoid Being Killed in Cars in Side Impact."*

In their study the authors analyzed accidents that caused 1,400 car occupant deaths during April, May and June 1980 on French highways. They found that 28 percent of those killed were victims of collisions against other cars, 34 percent died when the car struck a fixed obstacle such as a tree or utility pole and 21 percent were killed when the car they were riding in collided with a truck or bus. Of the remaining victims, 14 percent were killed in rollovers while three percent of the accidents were unclassifiable.

However, when they looked at the 369 individuals killed in side impacts they found that 30 percent were killed in collisions with other cars, 45 percent hit rigid objects and 17 percent were victims of accidents with heavy vehicles.

The authors wondered if the many trees along French roads might make their proportion of side-impact collisions with rigid objects higher than in most countries. But it is also known

that in the United States over half the people killed in all types of automobile accidents were the victims of impacts not involving other vehicles.

"Over the past 10 years the emphasis placed on protection in frontal impacts has enabled improvement of safety levels," the authors said. "In this respect, safety belts have played a decisive role. The seatbelt is recognized as dividing the risk in half."

Yet, if seatbelts were "worn by all passengers, the fatal casualties resulting from *frontal impacts* would still account for 46 percent of the individuals killed," they said. Of the 462 frontal impact deaths that weren't prevented by seatbelts or that probably wouldn't have been prevented had belts been worn, the authors said 20 percent could have lived if retention systems (belts, airbags, etc.) were improved and intrusion of auto body parts into the passenger area limited.

Their outlook for side-impact accident victims was even more gloomy. Of the individuals killed in side-impact collisions, they observed, most are the victims of impacts against rigid objects or against heavy vehicles. "For 95 percent of these fatal casualties, no countermeasures can be devised in view of the violence of the impacts."

Additionally, the bulk of the non-fatal side impacts involve collisions with other cars, not rigid objects, trucks or buses.

The improvements automotive engineers are seeking were outlined in another SAE paper by Dainius J. Dalmotas. This engineer for Transport Canada based his study on field data gathered during that government agency's Fully Restrained Occupant Study. Specifically he looked at protection afforded by the conventional three-point seatbelt assemblies in side impacts.

One of the first things Dalmotas noted was the same good, old news: If you're in a large car and it gets hit in the side, your chances of being hurt are less than if you were in a smaller car.

Also, if you're on the side of the car that actually gets hit, the dynamics of your injuries may be different than for passengers on the far side of the impact.

For example, the majority of chest, abdomen and pelvis injuries to near-side occupants resulted from contact with the intruding side door. However, abdomen and pelvis injuries occurred only in severe impacts where there was marked penetration of the door into the passenger compartment. Also, elderly passengers, particularly women, were likely to get rib fractures.

The engineering solutions to these problems involve redesigning both the front and sides of cars. This would ensure that the force of the impact was carried through the struck car's lower door sill rather than through the door and into the near-side occupants. Increased interior door padding would provide better chest level protection.

Also for near-side occupants, data suggests that in most instances the head sustains only a glancing blow with the window frame or related structure. Supplementary padding around the outer window frame edge, particularly along the roof side rails, would help reduce head and facial injuries.

Likewise, far-side occupants are exposed to a number of injury mechanisms which are unique to their seating positions. The potentially most serious are:

- Head injury from contact with the forward interior compartment as a result of upper body rotation over the shoulder belt;
- Direct head contact with the opposite side door because of upper torso rotation about the lap belt, and
- Injury to the lower inside ribs and abdominal region by the shoulder belt.

To substantially reduce these injuries engineers are working on providing better support by putting more pre-tension into belt systems and contouring seat backs.

However, the majority of serious injuries to far-side occupants were associated with intrusions (these can be caused indirectly via occupant-to-occupant contact). And again, the best solutions comes in improved design of *both* the front and side structures.

**The authors were J.Y. Foret-Bruno, F. Hartemann and Claude H. Tarrière of the Laboratoire de Physiologie et de Biomécanique Peugeot S.A./Reanult, and C. Got and A. Patel of I.R.B.A. Hôpital Raymond Poincaré.*

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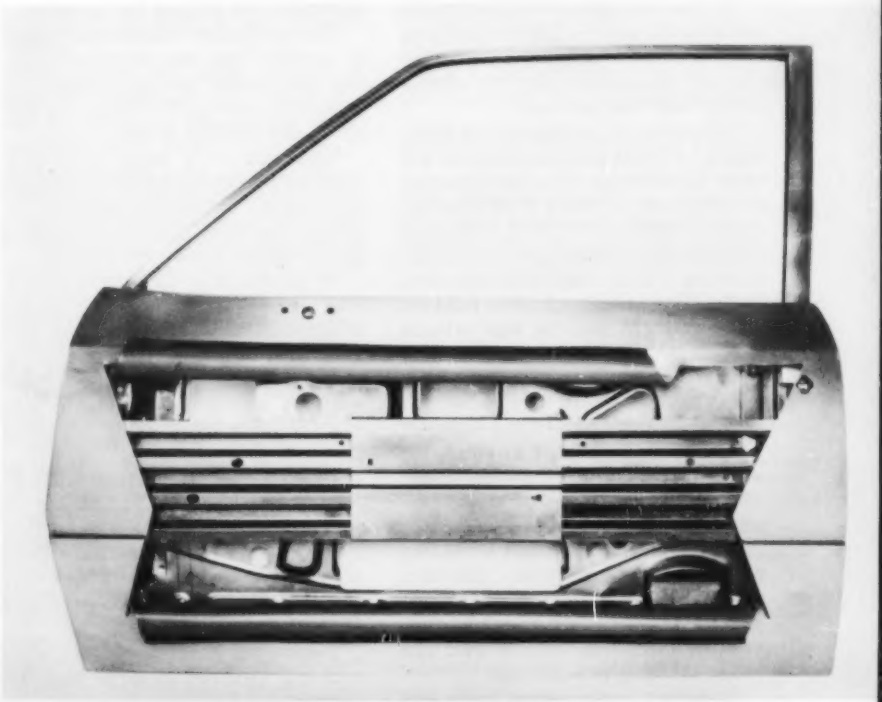
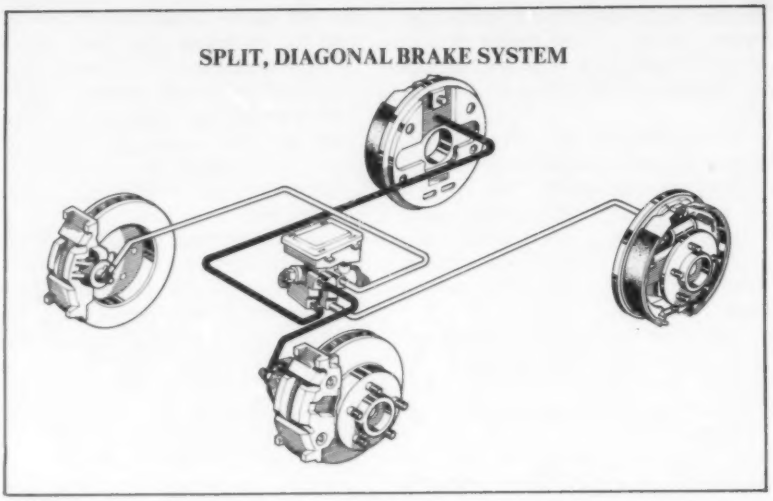


Current side-impact protection includes a door intrusion beam as seen inside this unit.

Brakes, Tires, Stability and Control



Even today's latest brake systems aren't ideal since wheels can still lock up.

What are you going to do if you have to panic stop? Well, it probably depends on what school you went to, who you learned from or what you've been reading.

Maybe you'll hit the brake pedal hard and then try to pump it a little to keep the wheels from locking so that you can maintain some directional control. But unless you're really good at this, your total stopping distance may be longer than some other methods — which could be too far (you know, like 10 feet on the wrong side of that stalled truck)!

Perhaps you'll just stomp on the brake pedal, lock the wheels and hope.

Or you may jump onto that pedal and lock the wheels. Than, when you need some steering control, back your foot off just enough that the wheels unlock and you can turn.

Still others of you have been influenced by what you've seen on TV news films lately. The films are part of a National Highway Traffic Safety Administration (NHTSA) investigation that led to General Motors Corp. recalling 243,000 1980 X-model cars. In the films, the car brakes hard on wet pavement and the rear wheels lock, causing it to spin out of control like a hippopotamus attempting a pirouette.

After seeing those films some of you would do almost anything to avoid this no-control situation. While still others of you would just do nothing.

Any way you approach it, having to brake in an emergency can be a touch-and-go situation. This is especially true if braking leads to a no-control condition where you are either skidding or spinning.

However, automotive engineers around the world are working to allow *all* drivers to brake a vehicle in the best way when faced with an emergency situation. Their target is for you to maintain directional stability with the shortest stopping distance while still having steering control.

The 1920's saw the early development of hydraulics to replace rods and cables as a way of quickly and uniformly applying four brakes, not just two. Those drum brakes left a lot to be desired, for they could cause unpredictable pulling left or right.

The next major breakthrough came in the 60's with the advent of fade-free disc brakes that predictably and uniformly convert the driver's pedal effort into braking action.

However, even these latest systems aren't ideal since the wheels can still lock up. When this happens, the driver can lose control because a locked wheel cannot be steered.

As solutions to this problem, several presentations about anti-skid brake systems were made at the 1983 SAE International Congress and Exposition in Detroit recently. These systems will allow drivers to stop quickly while maintaining full steering control.

Heinz Leiber and Armin Czinczel related experience gained during the past four years in which more than 200,000 passenger cars have been equipped with the four-wheel anti-skid brake system from Robert Bosch GmbH.

Meanwhile a new type rear brake lock-up control system was described by Satohiko Yoneda, Mitsubishi Motors Corp.; Yasuo Naitoh, Mitsubishi Electrical Corp.; and Hideo Kigoshi, Nippon Air Brake Corp.

Authors of another paper detailed an intensive 12-year program for bringing into large scale production a light, compact, cost-effective anti-skid system. The Alfred Teves GmbH employees who wrote this report were: Dr. H.-E. von Grünberg, J. Burgdorf, H.-W. Bleckmann, L. Weise and Dr. K. Timtner.

Also on the skid-control systems program was a paper by two Honda Research and Development Co. staff engineers. Makoto Satoh and Shuji Shiraishi's report dealt with a simplified control technique which simultaneously controls right and left wheels. This improves four-wheel anti-skid braking distances on rough roads.

Basically there are two types of anti-lock brake systems currently in use: rear-wheel and four-wheel controlling systems.

The rear-wheel system greatly improves straight line stability during panic braking. But it doesn't prevent steering loss resulting from front-wheel lock-up. On the other hand, four-wheel controlling systems allow steering during panic stops.

Generally, anti-lock brakes are most needed and are at their best on wet, snowy or icy roads. On such roads vehicles always require very long stopping distances, so the ability to maintain steering control during panic braking is critical in avoiding accidents.

How serious is the no-control situation? According to NHTSA's A.C.

Malliaris, Robert M. Nicholson, James H. Hedlund and Stanley R. Scheiner, no control is a precrash condition in about half of all single-car accidents and more for light truck and van single-vehicle accidents. It is also the second highest precrash condition in car-to-vehicle collisions.

In addition to happening often, the no-control condition also leads to more serious consequences than other precrash situations. In no-control conditions, the vehicle usually ends up skidding sideways. In the case of cars and other light vehicles, they are either tripped into a roll-over or they hit an object with their side. In either case the results are more serious than other types of accidents.

Scott G. Shadle, Lloyd H. Emery and Howell K. Brewer of NHTSA analyzed straight line braking performance as it relates to the no-control pre-crash condition in their SAE report. They found that vehicles manufactured in the early 1970's were underbraked at the front. As a result these early-70's vehicles locked up their rear wheels first which compromised their stability during hard braking.

The extent of front underbraking didn't seem to vary among larger models, but increased sharply for smaller ones.

Shadle, Emery and Brewer went on to study a limited sample of post-1980 model cars. They found that during hard braking the post-1980 cars offer actual front brake proportioning of 75 to 85 percent, which represented a level 20 to 40 percent higher than that of early 1970's models. As a result, the 1980 models had a much lower tendency to lock up rear wheels under hard braking, particularly when comparing small cars.

The trio also noted that light-duty trucks also appear to be moving toward higher levels of front brake proportioning, while heavier medium and heavy-duty trucks remain much underbraked at the front.

A question that naturally arises concerning the no-control condition is that of component failure. Data indicate that the numbers of accidents involving component failures are too small to account for the onset of no control at these high rates.

Of course when many people think of component problems that lead to accidents, they think of tire failures. Yet the number of tire failures, at least those recorded by police officers investigating fatal accidents, is too small to explain the high number of no-control accidents.

Well, if it isn't component failure that causes the no-control situation, what does?

In describing the events surrounding loss of control, Brewer and Roy S. Rice, also of NHTSA, used the concept of "limit maneuver." This is the gap that occurs when a car goes from a well-behaved, controlled state to one which is erratic and unpredictable.

Usually, limit maneuvers involve large control inputs by the driver such as slamming on the brakes or whipping the steering wheel in one direction or another. The results are large tire forces and vehicle motion changes. The loss of control happens when the car's demand for tire control forces exceeds what's available.

If you haven't already guessed, limit maneuvers are extreme events which occur far beyond the normal range of conventional driving, but are very common in accident-avoidance situations.

Limit maneuvers may be precipitated by numerous environmental factors such as weather, visibility, traffic, etc. Because of the obvious complexities surrounding the total driver-vehicle-environmental system, Brewer and Rice limited their SAE paper to stability and control aspects.

They found that older generation vehicles, "equipped with relatively low cornering stiffness but high maximum side force tires" (non-radials), tended to be more stable in modest cornering maneuvers but less stable in the limit maneuver than present generation automobiles. They also said that rear-wheel-drive vehicles tend to be more susceptible to stability and control changes under trailing (closed) throttle operations than are front-wheel-drive models.

Wet or icy road surfaces clearly reduce maneuverability at constant speed, according to Brewer and Rice, but don't seriously reduce stability in the sublimit range. "Problems in accident avoidance/occurrence in such conditions appears to stem from the additional use of brakes," they stated.

They also noted that while increased loading of a vehicle can affect stability, as long as recommended passenger/luggage limits weren't exceeded, the vehicle shouldn't become unstable.

Surprisingly, they found that the temporary spare tire presents no stability or control problems in accident-avoidance operating conditions.

"It is apparent," they concluded, "that even the well-designed original equipment vehicle can be degraded by operational and usage factors to produce potential problems with stability and controllability in the accident-avoidance situation."

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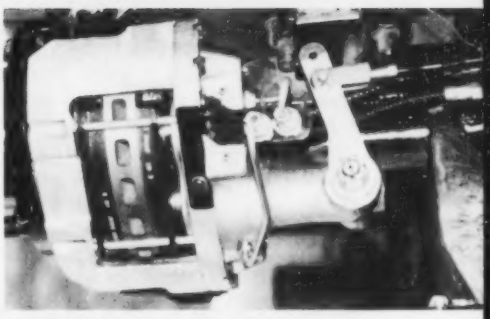
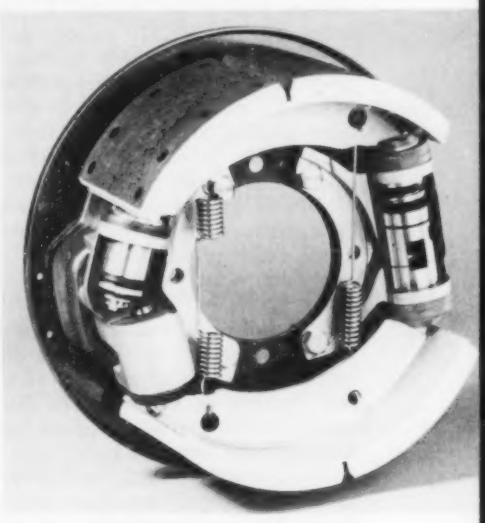


Reaction beam disc brakes from Lucas Girling were shown at the annual SAE show. These truck brakes combine the benefit of sealed pin slides with an open top for good cooling and ease of maintenance, in a structure designed to provide the maximum distribution of energy across the rotor.



An advanced design of hydraulically operated 15-inch duo-duplex drum brakes for truck and bus rear axles was announced by Lucas Girling at the SAE's Detroit show. At the other end of the scale, Lucas Girling's Australian associate company, Girlock, supplies the lightweight, low drag, high performance four-wheel disc brakes for the 1984 Corvette.

Auto Engineers' view of PEDESTRIANS

Reflective clothing was one of many treatments cited during the SAE pedestrians symposium as being beneficial to pedestrian safety.

Each year in the United States approximately 8,000 pedestrians are killed and over 150,000 injured by impacts with motor vehicles. In the same manner, 11,310 pedestrians were killed during 1979 in six European countries. They represented between 13 and 33 percent of all road users killed in that group of countries.

Therefore, it should come as no surprise that automotive engineers worldwide believe accidents where pedestrians are struck by cars are one of the major problems that must be considered when designing safer vehicles. To this end there was a two-day symposium on "Pedestrian Impact Injury and Assessment" during the recent 1983 SAE (formerly known as the Society of Automotive Engineers) International Congress and Exposition in Detroit.

There is sufficient information currently available to show that vehicle design has a major influence on the severity of the injuries sustained by the struck pedestrian, according to Dr. Steven J. Ashton and Dr. G.M. Mackay of the Accident Research Unit, University of Birmingham, England.

Accident investigation studies conducted by the National Highway Traffic Safety Administration (NHTSA) have shown that 70 percent of the serious injuries sustained by pedestrians are caused by the impact with the motor vehicle. In addition to injuries from the car itself, a pedestrian can be injured when thrown by the car. Statistics also showed that pedestrians were three times as likely to be struck with the front of the car as by the side.

When automobiles started growing smaller, many people expected that pedestrians would fare a little better when people and cars collided. Not so, said Robert J. Blodgett of NHTSA. According to Blodgett, the size of the car has little effect on the overall severity of injuries suffered by pedestrians. However, the proportion of head injuries tends to be greater for those struck by small cars.

The greater incidence of pedestrian head injuries from small cars seems to be related to their shorter, lower hoods, a factor which makes contact with the top of the hood and the windshield more likely than with larger vehicles. In fact, the more severe injuries from the windshield area tend to result from hitting the metal around the windshield rather than the glass itself.

In the urban settings studied, Blodgett found that the injuries to pedestrians thrown by cars were not related to car size.

Also at the symposium sponsored by the SAE's Passenger Protection Committee a working group from the Institute for Automobile Engineering, Technical University (Berlin), reported on their development of an efficient, environmentally compatible and safe passenger car. According to Wolfgang Wollert, Joachim Blödorn, Hermann Appel and Arne Kühnel, "the design of the UNI-CAR was specifically adjusted to the safety of persons outside the vehicle."

Thus, for protecting pedestrians as well as bicyclists and motorcyclists, several of the body work components were developed using polyurethane integral skin foam to cushion the impact of these people on the outside of the car. For instance, the car was given a reversible deformable front end and a cushioned hood as well as cushioned window frames and roof edges, without impairing the design or aerodynamics of the car.

"However," symposium organizer Dr. David C. Viano, assistant head of the Biomedical Science Department, General Motors Research Laboratories, pointed out, "the consequences of pedestrian accidents are obviously dependent on many factors in addition to vehicle design." And some of these other factors were also subjects of papers presented.

For example, Charles V. Zegeer, vice-president of Goodell-Grivas, Inc., reported on a study of the feasibility of roadway improvements as treatments for vehicle/pedestrian accidents.

"One of the treatments which appears most promising as a pedestrian safety measure is the use of one-way streets," according to Zegeer. "One-way street systems have consistently been found to reduce pedestrian accidents by reducing the complexity of crossing for pedestrians and allowing motorists to give more attention to pedestrians.

"The use of physical barriers also appears to be a feasible treatment to improve pedestrian safety at midblock locations, particularly where a high incidence of jaywalking is observed," Zegeer continued. Physical barriers include chains, fences and other devices which separate pedestrians from motor vehicles. The barriers help channel pedestrians to intersection crosswalks, although they have little effect near school campuses where students maneuver over and under most barriers. Far side bus stops (after an intersection rather than before) also appear to be feasi-

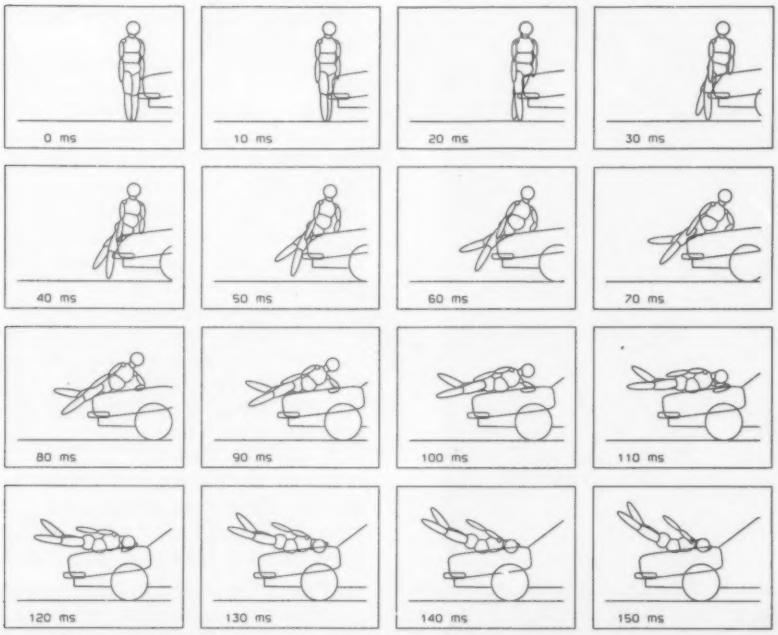
Peak accelerations for pedestrian head impacts are about 40 G's lower for aluminum hoods such as this one than similar steel units.

ble. And night-time lighting has improved pedestrian safety where there is high nighttime pedestrian activity.

Zegeer noted that several counter-measures were found to be feasible to some degree or in limited situations, such as the use of "NO TURN ON RED" signs at locations with high pedestrian volumes, "Signs and markings have been found to sometimes gain motorist attention," he said, "but their overuse can cause them to be ineffective. The installation of new traffic signals or use of pedestrian signal indications has not been found to improve pedestrian safety, although the use of exclusive pedestrian crossing intervals improves pedestrian safety."

Curb parking regulations (restricting curb parking and use of diagonal parking) can improve pedestrian safety but are often impractical. And although pedestrian overpasses can be quite effective options to crossing high-speed streets, they are very expensive and often under-utilized.

"Although several physical roadway improvements are feasible in terms of improving pedestrian safety," Zegeer stated, "such treatments are not enough. The use of effective education and enforcement programs are essential in the development of a safe pedestrian environment.



Computer kinematics of a 15-segment, three-dimensional model such as this are part of the multidisciplinary approach to reproducing real world pedestrian accidents and determining impact forces. The multidisciplinary approach combines mathematical modeling such as this, full scale testing and impactor testing.

Meanwhile, halfway around the world marked changes in the road and traffic environment in metropolitan Adelaide, South Australia, over the past two decades have reduced the relative frequency, and possibly the severity, of pedestrian accidents, according to A.J. McLean and A.J. Woodward, of the National Health and Medical Research Council, Road Accident Research Unit, The University of Adelaide.

They reported that these changes suggest that the Adelaide road system has become safer for the *careful* pedestrian. "The pedestrian who takes undue risks, whether it be through immaturity (as with children), intoxication or infirmity, is unlikely to benefit greatly from these changes to the road system," they noted. "It therefore comes as no surprise that the percentage of careless pedestrians was considerably higher in 1976-77 than 1963-64." Attention to this trend has also been drawn in a comparison of pedestrian accidents in Rio de Janeiro and Baltimore.

For this reason it is clear that modification of the road (pedestrian crossings, signalized intersections, raised median strips, etc.) and traffic environment and education of the pedestrian cannot be adequate solutions to the problem of pedestrian accidents, asserted McLean and Woodward. "This is not to say that these approaches are without value," they added. "Data show that environmental changes can be effective. But the limitations on their effectiveness emphasizes the continuing and urgent need for major improvements in the exterior crash-worthiness of passenger cars."

For many countries of the world pedestrian casualties are numerically as important as car occupant casualties, reflected Doctors Ashton and Mackay. "Arguably," they concluded, "the benefits from pro-pedestrian car exterior design are equal to, or greater than, the benefits from the provision of passive restraints or the mandated use of active restrains for occupants."

on-the-Road
Survival Equipment

The tiniest on-the-road vehicle failure can kill your vacation if you're not ready to fix it. Of course, you can't pack all your tools and all the spare parts you might need and still have room for your vacation gear. But you can be prepared for on-the-road survival by simply being practical.

To begin with, make sure that your spare tire is in good condition and properly inflated. Then make sure that you not only have a jack but that it will lift the vehicle far enough off the ground that you can get a flat off and the spare on. Also, pack a piece of 3/8- to 1/2-inch-thick plywood, about two feet square or longer, to place under the jack to keep it from sinking into soft ground.

Now make sure that you can loosen the lug nuts with the wrench that's in the car — there is one in the car, isn't there? If not, you'd better get a lug wrench that can do the job.

A working light that attaches directly to the battery will always be useful. One that plugs into the cigarette-lighter socket with a 10-foot cord will do. However, you'll still

The smallest problem on the road can ruin a vacation if you're not prepared to fix it.

Tire sealers and inflaters can be godsends on dark, rainy nights, but the tire that was losing air should be demounted and repaired as soon as possible.

Spare ignition parts are good things to take along.

Although hoses can be patched it's always better to have the actual spare on hand.

need a good flashlight in case the trouble is with the battery.

If you have an older car that has inexpensive ignition parts such as points and condenser, get spares.

Regardless of how good they look, always carry a spare lower radiator hose and the drive belt for the alternator/water pump. Upper radiator and heater hoses can be replaced with universal-type hoses or patched, if necessary. Of course, you can also patch the lower radiator hose — if you can get at it.

Epoxy sealer and silicone gasket can provide a quick fix for almost any fluid leak from the radiator to the gas tank. The silicone paste can be used as a gasket on the water pump, thermostat, fuel pump and valve cover. And while epoxies are usually made for specific, long-term uses, they can also serve as temporary fix-its for almost any fluid leak.

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A spare drive belt for the alternator/water pump is a must.

Emergency fuse kits come in all kinds and sizes.

Jumper cables should be found in everybody's trunk.

And don't forget the all-important safety equipment such as a good fire extinguisher.

Don't forget to carry enough spare fuses to get you through the night.

Safety wire, picture-hanger wire or something of that nature is a must for holding up a broken exhaust system or keeping your car's license plate from falling off.

Although you're not going to clean your carburetor while on vacation, a pint can of carburetor-cleaning solvent could make a big difference should you run out of gasoline. Most cars will run from two to five miles on a can.

As for the actual tools you'll need: take as few as possible. A good selection of adjustable wrenches, short slot and Phillips screwdrivers, locking pliers, electrical tape, jumper cables and a test lamp should handle all the jobs. And don't forget the all-important safety equipment: a good fire extinguisher and safety flares or triangles.

Safety triangles or flares are no good unless you use them.

BACKFIRE
LETTERS to the EDITOR

SEATBELTS IN THE PORSCHE!

I have been an avid reader of DRIVER Magazine for many years and really feel your magazine has made a significant influence on driver safety in the military.

I have a question that hopefully you can answer. I am the owner of a 1963 365B Porsche which was originally made without seatbelts. For the past two years I have been trying to purchase combination seat/shoulder harness type seatbelts for it. All I can find are lap belts or the fourpoint racing harness. Surely someone in this country must make shoulder/lap belts for installation in cars. I have tried many sources with no results.

Do you know where I can find them? I would appreciate knowing. Thank you.

Cmdr John P. Davis, USN
FPO New York 09578

There is no place to properly mount the combination seat/shoulder belts in your Porsche; therefore, none are available. Have you considered the competition-type? After all, they provide much more protection.

ATTENTION TO DETAILS

I just finished reading the February 1983 issue of your fine publication. Being a motorcycle driver since 1966, I naturally pay a little more attention to those articles about motorcycles, and noticed either an intentional oversight or a lack of detail in your "Ground Hog" article on P. 22.

The first picture in the article is of the rear tire of a cycle with a singular lack of tread. I noticed that besides checking for the obvious such as cuts, cracks, bruises, uneven wear and inflation, there was no mention of checking the amount of tread left. In my estimation, this is one of the more important checks to be made, not only at the end of winter, but on a daily basis.

Having been foolish in my younger years and ridden on a tire in this shape (once), I would be absolutely horrified of even thinking about it now. Any comment?

Since I first started riding motorcycles almost 20 years ago, I have found one certainty concerning them. If you're lucky, carelessness or inattention to detail will teach you more lessons than any school. If you're not lucky, you won't even learn the first.

RMI George L. Howe, USN
USS Mississippi

You're right about attention to details. However, our Tech Ed always thought if you were going to check for uneven tread wear, you also had to check tread wear. P.S. The Tech Ed quibbles about everything.

PRESSURIZED TIRE REPAIR?

I would like to pass on a warning about the use of products that seal and inflate a tire from a pressurized can.

A few years back I had a new tire that had a very slow leak in the tread area — it would take the tire about four days to go flat. A tire repairman suggested using one of those products rather than putting a plug in the tire because a plug would put a hole in a thus far undamaged cord. It made sense and it worked. It held for four years.

About two years later that tire went flat again, but not because of the original hole. The rim had rusted out and cracked from the inside. When I demounted the tire I discovered quite a bit of water in it (the sealer used in the product is water-based).

I have yet to see a gas station demount a tubeless tire to repair it, but if one of these products is used and the tire isn't demounted, another cracked rim could result. The manufacturers of these products recommend that any punctures be repaired as soon as possible.

I still think these are good products (especially on cold, dark, and rainy or snowy nights when the spare is buried under tons of luggage), but I would recommend that the tire be demounted and dried out as soon as possible even if, as in my case, further repair is not necessary.

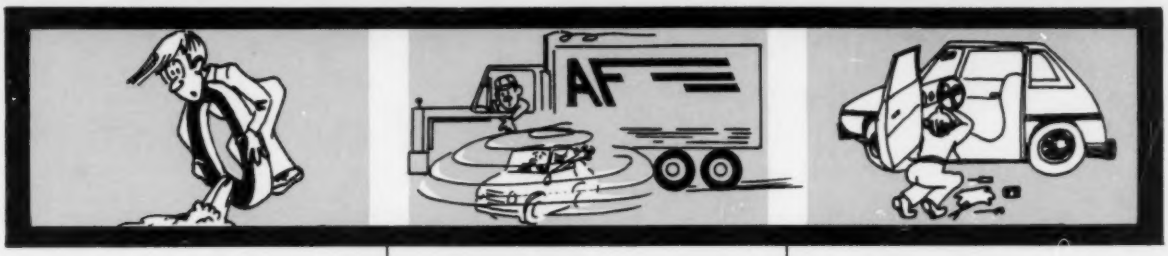
AQ1 Keith E. Pierce, USN
FPO New York 09501

Such tire sealing products are for temporary repair only. As the manufacturers recommend: repair the puncture as soon as possible.

ANOTHER NEAR MISS

After reading the February 1983 article on "The League of Frightened Drivers," I was really shocked at the excuses people came up with for not wearing seatbelts. I would like to share an experience that happened to me a few years ago. I'm sure that if I hadn't been wearing my seatbelt I would have been either killed or very seriously injured.

I was driving my Datsun B210 down Interstate 101 near Terra Linda, California at around 5 p.m. The rush hour traffic was extremely bad. I reached the top of a small hill and was in the far left lane when I noticed the traffic ahead of me had



come to a stop. I began to slow down and came to a stop right behind a van. As I stopped, I looked in my rear-view mirror and saw a bus approaching my rear very quickly. I looked in the next lane to see if it was clear to move over. It was. As I was moving into the next lane the bus hit me doing approximately 40-50 mph. I spun around three times in the middle of the freeway and a semi went around me.

I'm sure that if I hadn't had my seatbelt on I would have been thrown from my car and killed.

Since that one scary incident, I have always been convinced that seatbelts definitely do work and will save your life. I hope other people will be convinced too.

Cheryl A. Render
Eielson AFB, Alaska

THE PRIMARY OBJECTIVE

The primary objective in riding a motorcycle is to get from point A to point B *safely*. Simply stated, this does not appear to be a complex task. Right? Wrong!

This could be one of the most complex and demanding tasks you will ever encounter. The first 15 minutes is very critical, from engine start to the first obstacle you encounter. This could be a stop sign, pot hole, small animal, oil slick, gravel, children's toys, or your neighbor's garbage can.

The possibility that you are mentally or physically prepared for these obstacles is extremely slim. Only after riding for a longer span of time is the mind and body conditioned for these immediate responses. In other words, only after you have overcome some of these road-surface detours are you conditioned for those yet to come.

The same conditions exist when you dismount after a long ride. You have been so conditioned to motion and the mechanics of clutching backing, dodging, and shifting that, when you stop and get off, you forget to put down the kick stand or let the clutch out with the engine running and the bike in gear. The way to prepare for that first 15 minutes is:

- Sit on the bike for a few minutes on the center stand, operate the clutch, brake, shift lever, and go through all the motions as you would while riding.
- Condition your mind to anticipate other vehicle traffic, noise, and changing road surfaces.
- Condition your body by getting proper rest and eating in moderation.
- Condition your motorcycle by checking tire inflation, control cables for wear, lights and mirrors for operation and cleanliness, and your engine for operation (to prevent stalls).
- Condition yourself by dressing for the crash and not the ride by wearing approved, serviceable helmets, gloves, boots, jackets, and full-length pants.
- Last of all, do a few warmup movements such as a couple of slow left turns, right turns, and a panic stop or two under safe, controlled conditions, prior to riding in traffic.

Your attention and time spent on the foregoing conditions do not guarantee your getting from point A to point B, but it does satisfy the requirement to attempt it in a safe manner. Remember the old adage that "an ounce of prevention is worth a pound of cure."

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You're right. The critical period in any ride is that first 10 minutes or five miles when you're still on familiar ground and aren't paying enough attention to traffic. But you shouldn't have to spend several minutes "playing" with your bike's controls before each ride. Any good motorcycle riders' course will have you operating these controls as second nature before it's half over. If you have to think about your controls your mind won't have the attention necessary to handle on-the-road problems. And if you're not prepared for that very first obstacle, you'll probably not get much farther – it's usually the first one that jumps up and bites you.

AN EDUCATION UNDER THE DASH

I suppose I'm from the old school where things were simple and uncomplicated, especially when it came to automobiles.

For example, my Japanese auto had a total loss of instrument lighting. Like you I checked the fuses first. They were okay. The next step was checking the wiring and bulbs. When I looked under the dash I was very disillusioned. There were countless wire bundles and the air conditioning ducts made access to the instrument panel lights inaccessible.

After conversation with the dealer's mechanics, I was informed that the complete dash assembly had to be removed to replace the dash board circuit panel, which had an open break on the wire board. Total cost was very expensive.

I suppose the moral of this story is "things get better but not easier."

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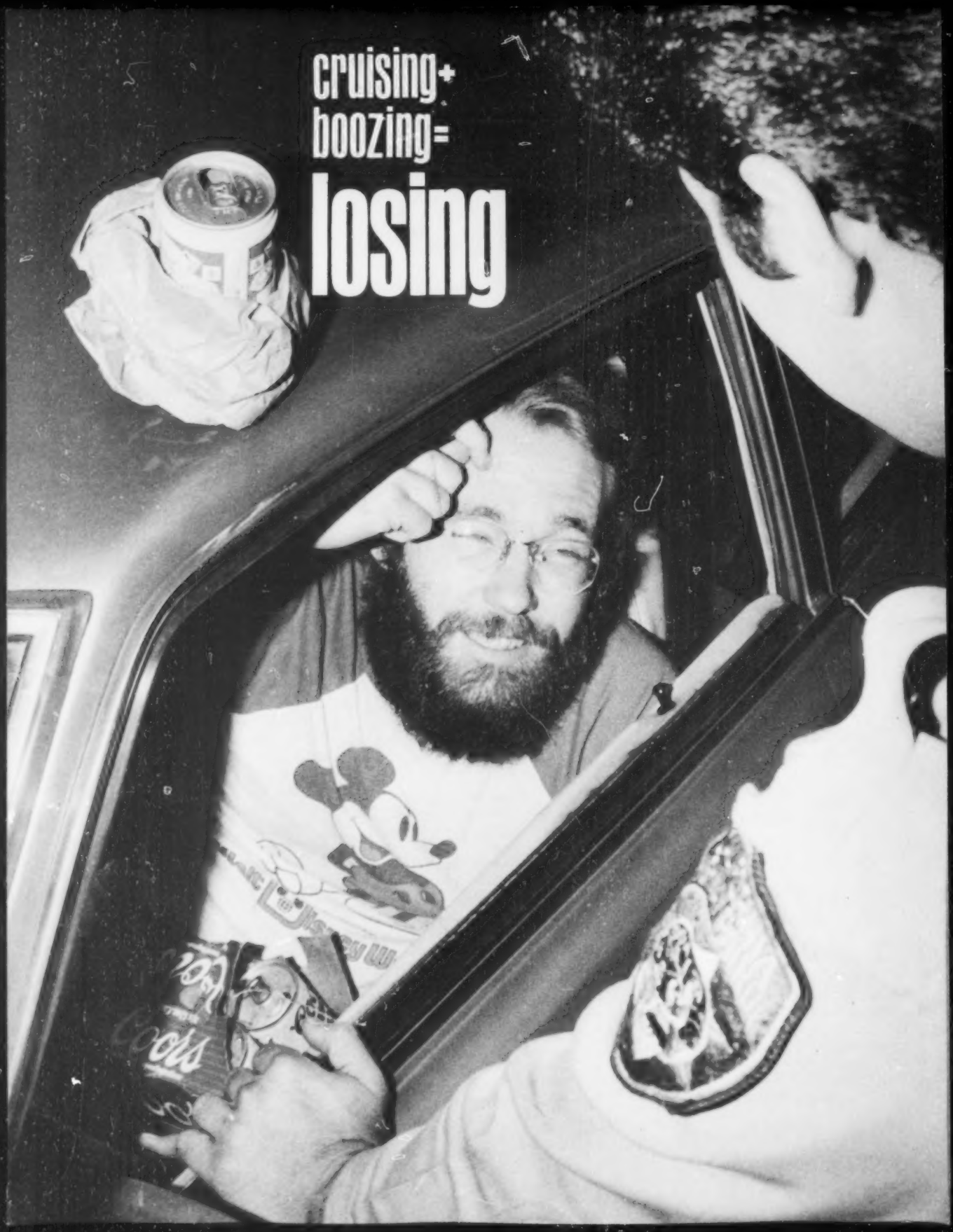
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